

# Process Sheet

**Drawing Name** : 206 L HIGH GEAR SKIDTUBE

Part Number : D206642441  
Drawing Number : D2650 REV E  
Project Number : N/A  
Drawing Revision : E  
Material : N/A  
Due Date : 05/09/2007

Qty: 1 Um: Each

### Additional Product

Jot Number:

Seq. #:	Machine Or Operation:	Description :
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1.0 DC DOCUMENT CONTROL

**Comment: DOCUMENT CONTROL**

Photocopy bluefile and create labels per PPP D206-642-441 CHG002

2.0 D2620 Bent 206 Skidtube

**Comment:** Qty.: 1.0000 Each(s)/Unit      Total : 1.0000 Each(s)  
Pick:

Qty	Part Number	Description	Batch
1	D2620	Bent Tube 3" OD	B33879 Pmc 07-08-21 (1)

3.0	D2647	Cap
-----	-------	-----

**Comment:** Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)  
Pick:

Qty	Part Number	Description	Batch
1	D2647	Fwd Cap	<u>729328</u> BE 070822

4.0 LANDING GEAR 1 LANDING GEAR RESOURCE 1

**Comment: LANDING GEAR RESOURCE 1**

1-Deburr Fwd edge of tube *pmc07-0521* (1)

2-Remove ridge on inside of Fwd edge of tubeas per Dwg D2650 *W 07-08-21*

3-Weld Fwd Cap as per Dwg D2650. Use aluminum rod. Grind D2647 to fit as required.

A/R Aluminum Rod m704221 BE 07-08-22

4-Grind weld flush to cap on top surface only. BE 07-08-22



Date: Thursday, 16/08/2007 7:39:00 AM  
User: Linda Lacelle

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: 206 L HIGH GEAR SKIDTUBE

Job Number: 33927A

Part Number: D206642441

Job Number:



Seq. #:

Machine Or Operation:

Description :

5-Cut aft end 138.60" from front of tube

6-Drill pilot holes using drill jig DT8025 & DT8169 (A,B,C,D). Open to Ø0.312".

7-Drill holes for wearplates using DT 8028-7. Open to Ø 0.297".

8-Open using #6 Drill Bit

9-Open holes for Tow Ring to Ø0.625" as per Dwg D2650, D2650-7 Drilling Detail

10-Remove inner indexing ridge on aft end of skidtube as per Dwg D2650

11-Deburr and Blow out all chips from inside the tube

AWM 07/08/23  
DP

DP 7-8-23

5.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



AWM 07/08/23



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

6.0

D26547

206 L Beam (Web)



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(\$)

Pick:

Qty Part Number

Description

Batch

1 D2654-7

Web

B-33994

7.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Open holes to finished size as per Dwg D2650, D2650-7 Drilling Detail (without cutting fluid)

2-Countersink crossbolt spacer holes as per Dwg D2650(without cutting fluid)

3-Deburr. Blow out chips. Grind alodine off around crossbolt spacer.

4-Bond D2654-7 web in place as per QSI 015 Ensure holes line up Allow 12 Hrs. cure time before cutting

Start Date: 07/08/07

Time: 11:30 AM

Finish Date:

Time:

A/R Sikaflex-291

M104989

Sikaflex expiry date:

08/01/01

AWM 07/08/27  
DP

AWM 07/08/27

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 16/08/2007 7:39:00 AM

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## Process Sheet

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Drawing Name: 206 L-HIGH GEAR SKIDTUBE

Job Number: 33927A

Part Number: D206642441

Job Number:



Seq. #:

Machine Or Operation:

Description:

8.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

En 07/08/28 (10)

9.0

D2649

Crossbolt Spacer



Comment: Qty.: 23.0000 Each(s)/Unit Total: 23.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

23 D2649

Crossbolt spacer

B 33214

BE 07-08-28

10.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Insert cross bolt spacers D2649. Weld as per QSI 004 and Dwg D2650. Remember to back drill each hole to 0.25" before welding the other side. Use aluminum rod.

A/R

Aluminum Rod

M 104221

BE 07-08-28

2-Grind welds flush as per Dwg D2650. Masking Tape access to inside of the Skidtube

R 7-8-29

3-Counterbore 5/16" x 0.750" deep as per Dwg D2650Deburr

R 7-8-30

11.0

D2680041

Nut Plate



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

1 D2680-041

Nut Plate

B 30446 Q

R 7-8-30

12.0

CCR264SS33

Cherry Rivet



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part Number

Description

Batch

2 CCR264SS3-3

Rivets

M 103525

R 7-8-30

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Job Number: 33927A

Part Number: D206642441

Job Number:



Seq. #:

Machine Or Operation:

Description :

13.0

M7885343

Rivet



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part Number

Description Batch

2 M7885/3-4-3

Rivets

M 102515

7-8-30

14.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Install D2680-041 Nut Plate as per Dwg D2650

7-8-30

15.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

07/08/31

16.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

07/09/31

17.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Pressure wash as per QSI 005

07/09/06

1

18.0

SPRAY PAINTING

SPRAY PAINTING



Comment: Make sure Nut Plate Thread protected use paint screw

Issue P.O

4543

Atelier Debosselage

07/09/07

Spray Paint Delfleet Blue

Clear with Delfleet

19.0

QC14

INSPECT SPRAY PAINT



Comment: INSPECT SPRAY PAINT

1

18b need inspect

07/09/07

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Job Number: 33927A

Part Number: D206642441

Job Number:



Seq. #:

Machine Or Operation:

Description :

20.0

D26483

Wearpad



Comment: Qty.: 6.0000 Each(s)/Unit Total: 6.0000 Each(s)

Pick:

Qty Part Number

Description Batch

6 D2648-3

Wearpad

B32465

M.L

21.0

D265615

Wearplate



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number

Description Batch

1 D2656-15

Wearshoe

B34170

M.L

22.0

D265623

Wearplate



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number

Description Batch

1 D2656-23

Wearshoe

B32580

M.L

23.0

D265637

Wearplate



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number

Description Batch

1 D2656-37

Wearshoe

B32017

M.L

24.0

D34291



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number

Description Batch

1 D3429-1

Wearpad

B32510

M.L 07/09/12

(1X)

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Job Number: 33927A

Part Number: D206642441

Job Number:



Seq. #:

Machine Or Operation:

Description :

25.0

ALS41032130

Insert



Comment: Qty.: 60.0000 Each(s)/Unit Total: 60.0000 Each(s)

Pick:

Qty Part Number

Description Batch

60 ALS4-1032-130 Inserts  
or (see QSI 017)

M102475

m.k

26.0

AN960JD10L

Washer



Comment: Qty.: 60.0000 Each(s)/Unit Total: 60.0000 Each(s)

Pick:

Qty Part Number

Description Batch

60 AN960JD10L

Washer

M104885

m.k

27.0

MS27039108

Screw



Comment: Qty.: 60.0000 Each(s)/Unit Total: 60.0000 Each(s)

Pick:

Qty Part Number

Description Batch

60 MS27039-1-08

Screw

M105433

m.k

28.0

D26511

Plug



Comment: Qty.: 22.0000 Each(s)/Unit Total: 22.0000 Each(s)

Pick:

Qty Part Number

Description Batch

22 D2651-1

Plugs

B34146

m.k

29.0

D26513

O-Ring



Comment: Qty.: 22.0000 Each(s)/Unit Total: 22.0000 Each(s)

Pick:

Qty Part Number

Description Batch

22 D2651-3

O-Rings

B32099

m.k 07/09/12

(IX)



Date: Thursday, 16/08/2007 7:39:00 AM  
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Job Number: 33927A

Part Number: D206642441

Job Number:



Seq. #:

Machine Or Operation:

Description :

30.0

AN960JD416

Washer



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number

Description Batch

1 AN960JD416

Washer

M103338

M-L

31.0

MS27039406

Screw



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number

Description Batch

1 MS27039-4-06

Screw

M15144

M-L

32.0

D2646

Aft Cap



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part Number

Description Batch

1 D2646

Aft Cap

B34152

M-L

33.0

AN960JD10L

Washer



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part Number

Description Batch

2 AN960JD10L

Washer

M104885

M-L

34.0

MS27039108

Screw



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part Number

Description Batch

2 MS27039-1-08

Screw

M105433

M-L

35.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

1-Install inserts & wearpads as per dwg D2922. Use a drop of Sikaflex inside insert holes before installing wearpad/wearplate.

A/R Sikaflex-291

M105487

M-L 07/09/12

Date: Thursday, 16/08/2007 7:39:00 AM  
User: Linda Lacelle

## Process Sheet

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Drawing Name: 206 L HIGH GEAR SKIDTUBE

Job Number: 33927A

Part Number: D206642441

Job Number:



Seq. #:

Machine Or Operation:

Description :

Sikaflex expiry date:

08-01

2-Install O-Rings D2651-3 on plugs D2651-1 with Petroleum Jelly and install plugs as per Dwg D2650. Clean excess adhesive

3-Install MS27039-4-06 Screw as per DEO 9153

4-Inspect for foreign object per QSI 024

5-Install D2646 Aft Cap and seal with Sikaflex Clean excess adhesive

A/R Sikaflex-291

Sikaflex expiry date:

M105487  
08-01

6-Wing Walk as per Dwg D2650-7 and QSI 005 4.4

Batch: M108386

1X  
m-l 07/09/12

36.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

in 02/02/17

37.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

in 07/09/17

38.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location:

PPP 32497

07/19/18

39.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

07/09/17

Job Completion



U 07.09.19

**DART**

DESIGN <i>11/</i>	DRAWN BY <i>11/</i>	<b>DART AEROSPACE USA, INC.</b> PORT HADLOCK, WA	
CHECKED <i>PH</i>	APPROVED <i>11/</i>	DRAWING NO. D2650	REV. E SHEET 1 OF 5
DATE 06.03.30		TITLE 206/407 SKIDTUBE ASSEMBLIES SCALE NTS	
A	97.03.25	NEW ISSUE	
B	97.06.26	AS MANUFACTURED CHANGES	
C	97.10.29	CHANGE HOLE PATTERN AND FRONT END	
D	04.05.17	REDRAW; INCORP. DE09136/9153/9163 MOD GROUND HNDLNG ON D2650-1/-3	
E	06.03.30	RMV C'BORE, CHG DRILL, ADD CHAMFER	

RELEASED

16 04 17 *11/*

Qty -1	Qty -3	Qty -5	Qty -7	Part Number	Description
X				D2650-1	SKIDTUBE ASSEMBLY
	X			D2650-3	SKIDTUBE ASSEMBLY
		X		D2650-5	SKIDTUBE ASSEMBLY
			X	D2650-7	SKIDTUBE ASSEMBLY
1	1	1	1	D2600-1-160	EXTRUSION
1				D2654-1	WEB
	1			D2654-3	WEB
		1		D2654-5	WEB
			1	D2654-7	WEB
1	1	1	1	D2646	AFT CAP
1	1	1	1	D2647	CAP
16	17	19	23	D2649	CROSS BOLT SPACER
16	18	14	22	D2651-1	PLUG
16	18	14	22	D2651-3	O-RING
1	1	1	1	D2680-041	NUT PLATE
2	2			D3286-1	DOUBLER
2	2			D3286-3	STUD
42	44	54	60	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, ALS7-1032-130)
2	2	2	2	AN960JD10L	WASHER
2	2	2	2	CCR264SS3-3	RIVET
2	2	2	2	CR3212-4-03	RIVET
2	2	2	2	MS27039-1-08	SCREW
1	1	1	1	MS27039-4-06	SCREW
1	1	1	1	AN960JD416	WASHER
52	52			CR3212-4-04	RIVET

**NOTES**

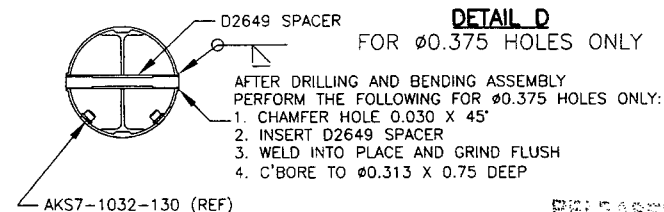
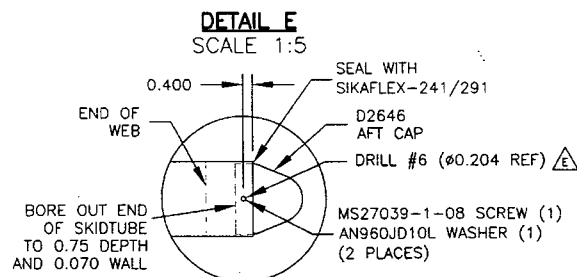
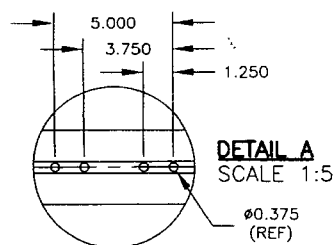
- 1) WELD PER DART QSI 004
- 2) DAMAGE TOLERANCE ON FWD BEND:  
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- 3) BOND WEB INTO OUTER TUBE WITH SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015
- 4) INSERT D2651-1 PLUG C/W D2651-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE)
- 5) FINISH: -CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
-POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3  
-BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- 6) DRILL Ø0.297 FOR ALS7-1032-130 INSERTS USING TEMPLATE DT8056-1 ON -1 TUBE, DT8056-3 ON -3 TUBE, DT8056-5 ON -5 TUBE, AND DT8056-7 ON -7 TUBE. INSTALL INSERTS AFTER FINISH.
- 7) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED

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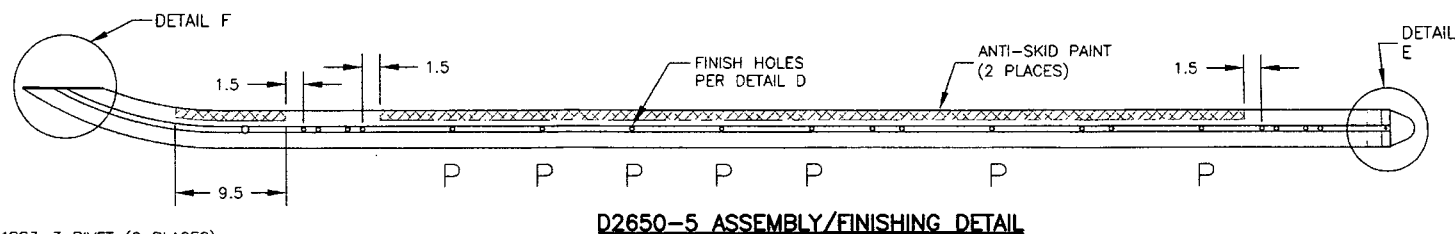
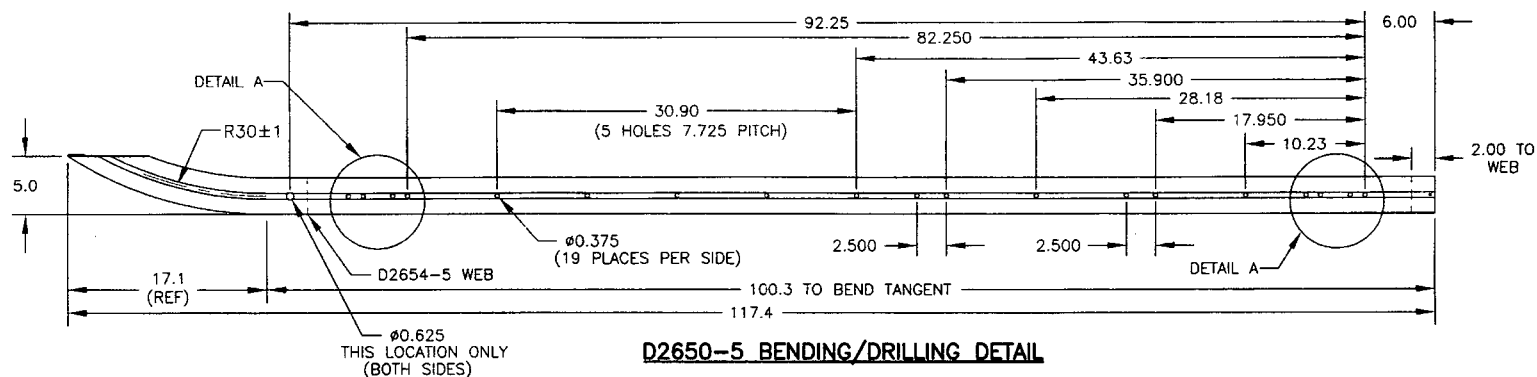
SCALE

1:10



RELEASED

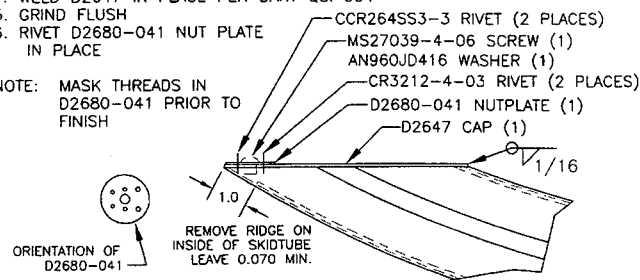
0.04.7 #



**DETAIL F (NOT TO SCALE)**

1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D2647 (TRIM AS NECESSARY)
4. WELD D2647 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D2680-041 NUT PLATE IN PLACE

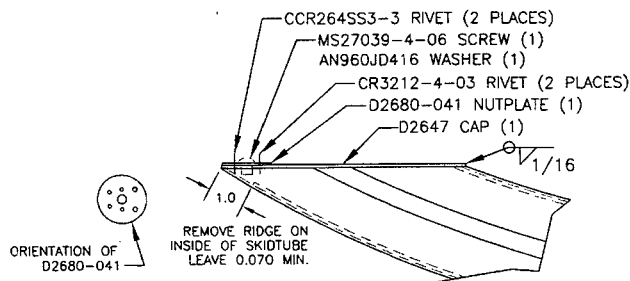
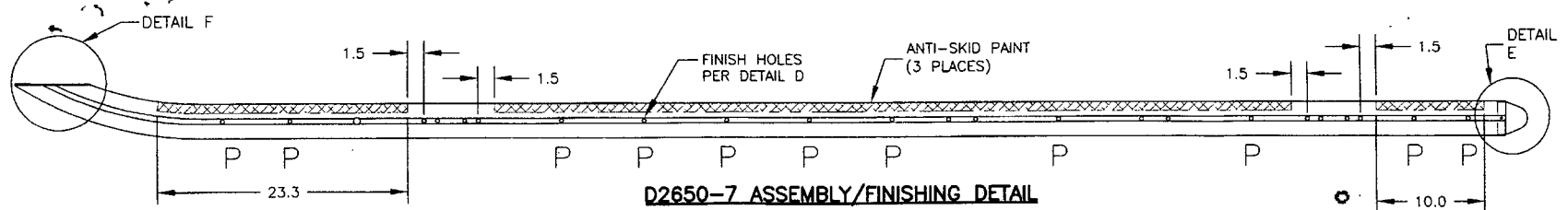
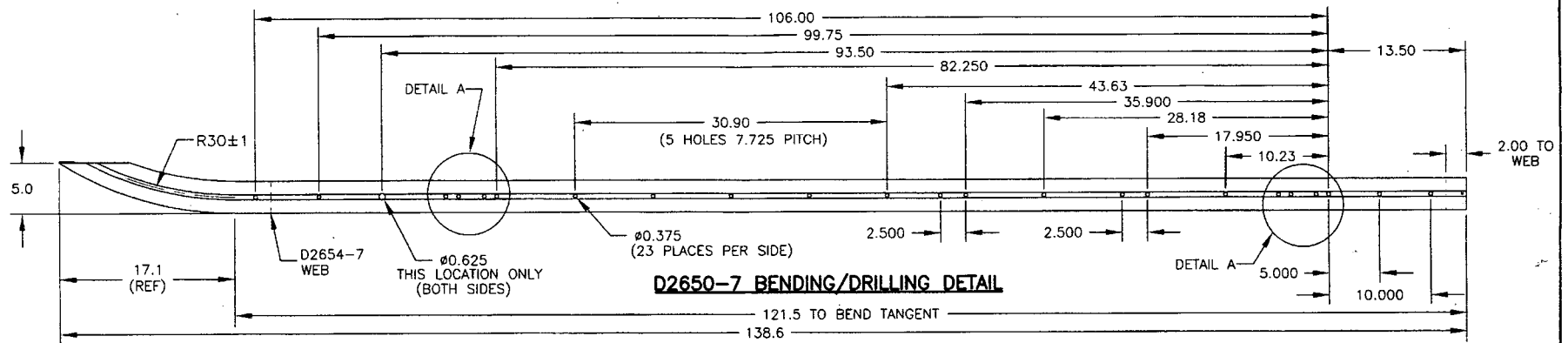
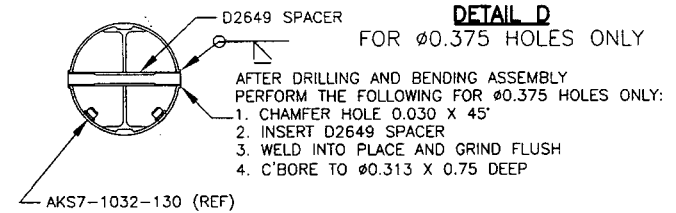
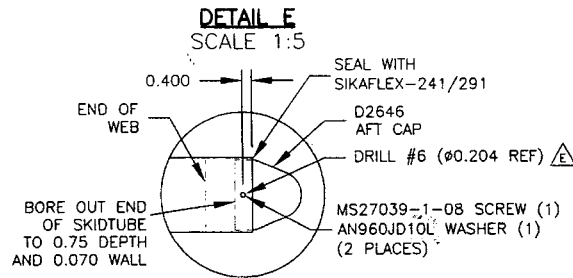
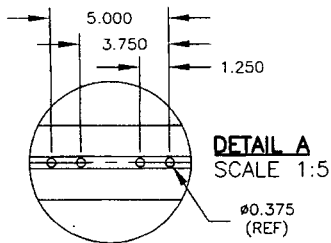
NOTE: MASK THREADS IN D2680-041 PRIOR TO FINISH



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DESIGN	GP	DRAWN BY	GP	<b>DART</b> DART AEROSPACE USA, INC. PORT HADLOCK, WA	REV. E
CHECKED	PH	APPROVED	PH	DRAWING NO. D2650	SHEET 4 OF 5
DATE	06.03.30	TITLE	SKIDTUBE	SCALE	1:10



- DETAIL F (NOT TO SCALE)**
1. CUT TUBE LEVEL
  2. REMOVE RIDGE ON FWD SIDE
  3. LOCATE D2647 (TRIM AS NECESSARY)
  4. WELD D2647 IN PLACE PER DART QSI 004
  5. GRIND FLUSH
  6. RIVET D2680-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D2680-041 PRIOR TO FINISH

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DESIGN	44	DRAWN BY	44	<b>DART</b> DART AEROSPACE USA, INC.	REV. E
CHECKED	44	APPROVED	44	D2650	SHEET 5 OF 5
DATE	06.03.30	TITLE	SKIDTUBE	SCALE	1:10





NO. 123

# AWS D17.1.2001 QUALIFICATION TEST RECORD

Name Douglas Elliott  
 Joint Welding Procedure 116  
 Part number and Job number 20664224 / 1033035A

## TEST WELDS REQUIRED

BASE METAL Alum WELDING PROCESS TIG  
 Penetration Complete ☒ Partial ☐ Single Weld ☒ Double Weld ☐  
 Current AC ☒ DC ☐ Backing YES ☐ NO ☒

	Position		Vertical Down <input type="checkbox"/> Up <input type="checkbox"/>	
Sheet Groove	1G <input type="checkbox"/>	2G <input type="checkbox"/>	3G <input type="checkbox"/>	4G <input type="checkbox"/>
Tube Groove	1G <input type="checkbox"/>	2G <input type="checkbox"/>	3G <input type="checkbox"/>	6G <input type="checkbox"/>
Sheet Fillet	1F <input type="checkbox"/>	2F <input type="checkbox"/>	3F <input type="checkbox"/>	4F <input type="checkbox"/>
Tube Fillet	1F <input type="checkbox"/>	2F <input type="checkbox"/>	4F <input type="checkbox"/>	5F <input type="checkbox"/>

Crossbolt Spacer Welded into Skidtube

## TEST RESULTS

Visual Pass ☒ Fail ☐  
 Penetration Pass ☒ Fail ☐  
 Crossbolt Spacer Pass ☒ Fail ☐

The above named individual is qualified in accordance with AWS D17.1.2001 to weld

Date of Test Coupon 6/18/20 Qualifier Louie Boud